

Year 5: Scaling, rates and combinations: answers

Year 5 - Long Multiplication - Lesson 4.6

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/ks2-sats/maths/year-5/ch04-multiplication/scaling-rates-and-combinations/

Exercise 4F Scaling, rates and combinations Non-calculator

1 Work out each answer. Draw a bar model to help.

- (a) A pen costs 45p. A notebook costs 4 times as much as the pen. How much does the notebook cost?

Answer: 180p

- (b) Mia runs 150 m. Leo runs 6 times as far as Mia. How far does Leo run?

Answer: 900 m

- (c) A bag holds 35 marbles. A jar holds 12 times as many marbles. How many marbles does the jar hold?

Answer: 420 marbles

2 Work out each answer.

- (a) A rope is 86 m long. A short rope is half as long. How long is the short rope?

Answer: 43 m

- (b) A bag has 120 g of flour. A small bag has a quarter as much. How much flour is in the small bag?

Answer: 30 g

- (c) A road is 450 m long. A path is a tenth as long. How long is the path?

Answer: 45 m

- (d) A tank holds 80 litres. A jug holds three quarters as much as the tank. How much does the jug hold?

Answer: 60 litres

3 Use the bar model idea to find the smaller amount.

- (a) Mia has 72 stickers. This is 3 times as many as Tom has. How many stickers does Tom have?

Answer: 24

- (b) A film lasts 90 minutes. It is 6 times as long as an advert. How long is the advert, in minutes?

Answer: 15

4 Use a table to work out each answer.

- (a) 4 pens cost £6. How much do 12 pens cost?

Answer: £18

- (b) 6 cakes cost £9. How much do 24 cakes cost?

Answer: £36

- (c) 5 litres of paint cover 40 m^2 . How many m^2 do 25 litres cover?

Answer: 200

5 Use a table to find the number of items.

- (a) 5 apples cost £3. How many apples can you buy for £21?

Answer: 35

- (b) 3 bananas cost £4. How many bananas can you buy for £24?

Answer: 18

6 Work out each total.

- (a) A cyclist rides 12 km each hour. How far does she ride in 5 hours?

Answer: 60 km

- (b) A train travels 45 km each hour. How far does it go in 4 hours?

Answer: 180 km

- (c) A machine makes 28 bolts each minute. How many bolts does it make in 15 minutes?

Answer: 420 bolts

7 Work out the cost. Give each answer in pounds.

- (a) Apples cost £1.20 per kg. How much do 7 kg of apples cost?

Answer: £8.40

- (b) Carrots cost 89p per kg. How much do 5 kg of carrots cost?

Answer: £4.45

- (c) Cheese costs £6.50 per kg. How much do 4 kg of cheese cost?

Answer: £26.00

8 How many different combinations are there?

- (a) Amina has 4 tops and 6 skirts. She chooses one top and one skirt.

Answer: 24 outfits

- (b) A shop sells milkshakes in 3 sizes and 5 flavours. One size and one flavour make a milkshake.

Answer: 15 milkshakes

- (c) A café has 3 starters, 4 main courses and 2 desserts. A meal has one of each.

Answer: 24 meals

9 Priya has some T-shirts and 6 pairs of shorts. An outfit is one T-shirt and one pair of shorts. She can make 42 different outfits. How many T-shirts does she have?

Answer: 7

10 A recipe uses 150 g of flour to make 12 biscuits. Sam wants to make 36 biscuits. How much flour does he need?

Answer: 450 g

- 11** Tom's rope is 48 m long. Amy's rope is a quarter as long as Tom's. Ben's rope is 3 times as long as Amy's. How long is Ben's rope?

Answer: 36 m

- 12** A shop has 3 sandwiches, 4 drinks and 2 cakes. A meal deal is one sandwich, one drink and one cake. The shop adds 1 new sandwich. How many more meal deals are there now?

Answer: 8 more

- 13** Leo says, "A quarter as much as 120 g is $120 \times 4 = 480$ g." What mistake has Leo made? What is the correct answer?

Answer: 30 g. Leo multiplied by 4; he should have divided by 4.

- 14** Always, sometimes or never?

(a)

If you make a number 3 times as big and then find a third of it, you get back to the number you started with.

Answer: Always

(b)

The number of combinations of two groups is bigger than the number of items in the larger group.

Answer: Sometimes

- 15** Challenge! A café sells 3 types of burger and 4 types of side. A meal is one burger, one side and one drink. There are 60 different meals. How many types of drink are there?

Answer: 5